

## CLAIMS

We claim:

1. An article of manufacture embodied in a computer-readable medium for use in a processing system for modeling configurations of a wireless local area network, the article comprising:

a configuration receiving logic for causing the processing system to determine a set of original configurations of the wireless local area network;

a simulation logic for causing the processing system to simulate an outcome based upon the set of original configurations in accordance with a goal;

a configuration creation logic for causing the processing system to create a set of new configurations based upon the outcome; and

a management logic for causing the processing system to apply the set of new configurations to the wireless local area network.

2. The article set forth in claim 1 wherein the simulation logic is a discrete event simulation logic.

3. The article set forth in claim 1 further comprising an analysis logic for causing the processing system to determine if the outcome satisfies the goal.

4. The article set forth in claim 1 wherein the goal is a user defined goal.

5. The article set forth in claim 1 wherein the goal is a historical-based goal.

6. The article set forth in claim 1 wherein the simulation logic includes a simulation execution logic for causing the processing system to simulate a wireless local area network based upon the set of new configurations.

7. The article set forth in claim 6 wherein the algorithm is Newton's method.

8. The article set forth in claim 6 wherein the algorithm is Gradient Search.

9. The article set forth in claim 1 wherein the simulation logic includes optimization logic for causing the processing system to optimize the set of new configurations based upon the goal.

10. The article set forth in claim 1 wherein the simulation logic includes prediction logic for causing the processing system to predict an effect on the wireless local area network based upon the set of new configurations.

11. The article set forth in claim 10 wherein the effect is one of total throughput, noise mitigation, access point loading and voice/data distribution.

12. The article set forth in claim 1 further including a display logic for causing the processing system to display a graphical representation of the outcome.

13. A system for simulating and managing a wireless local area network, the system comprising:

a simulator logic adapted to process a goal to generate a set of network configurations;

a management logic adapted to process the set of network configurations; and

an interface module adapted to transfer the set of network configurations to the management logic.

14. The system set forth in claim 13 wherein the simulator logic further includes a discrete event simulator logic adapted to process the goal to generate the set of network configurations.

15. The system set forth in claim 13 further comprising a configuration logic adapted to establish the set of network configurations from the goal.

16. The system set forth in claim 13 further including a computer-readable medium adapted to maintain the set of network configurations.

17. A method for adjusting a configuration of a wireless local area network, the method comprising the steps of:

establishing a goal to represent a desired criteria;

generating a set of goal configurations;

simulating a wireless local area network via a discrete event simulation based upon the set of goal configurations;

establishing a set of outcome configurations bases upon the simulation; and

applying the set of outcome configurations to the wireless local area network.

18. The method set forth in claim 17 wherein the goal is a user defined goal.
19. The method set forth in claim 17 wherein the goal is based upon a historical-based goal.
20. The method set forth in claim 17 further comprising the step of executing a simulation algorithm.
21. The method set forth in claim 17 further comprising the step of optimizing an effect based upon the set of goal configurations.
22. The method set forth in claim 17 further comprising the step of displaying an effect on the wireless local area network based upon the set of goal configurations.